REVIVAL OF SUPRAPUBIC PROSTATECTOMY.

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AMERICAN surgeons have, as is well known, to a great extent, allowed suprapubic prostatectomy to lapse into a state of "innocuous desuetude" owing to the unfortunate results of the old Belfield-McGill operation and the improvements recently made, mostly by Americans, in the perineal route.

Mr. Moynihan's interesting article, describing, in the ANNALS OF SURGERY for January of this year, his method of removing the hypertrophied prostate by the suprapubic route and reporting the twelve cases operated by him up to the date of writing, not only calls attention to the recent return of English surgeons to operations through the bladder, but suggests some matters of interest connected with what is generally known in England as the "Freyer Suprapubic Prostatectomy," of which the Moynihan technique is evidently a modification, in that he makes no attempt to preserve any portion of the prostatic urethra, while in other respects he follows the essentials of the operation as practised and published by Mr. Freyer[1] about a year earlier than by Mr. Moynihan.

Mr. Moynihan very justly gives Mr. Freyer credit for "calling us back to the rational surgical treatment of enlargement of the prostate." By this I take it he means as contrasted with castration and vasectomy, for the English surgeons have never taken very kindly to the perineal route.

I judge that a brief explanation of the principles on which Mr. Freyer bases his "enucleation" will interest many who are engaged in prostatic surgery, but who have come to regard the "upper route" as obsolete, ineffective, and dangerous, and who have either overlooked Mr. Freyer's writings or have not attached to them the importance they deserve.

My object is to touch upon general principles rather than technical details, which are aptly described by Mr. Moynihan, as well as in the writings of Mr. Freyer, already referred to, and in a recent monograph by the same operator.[2]

Several personal interviews with Mr. Freyer in April, 1903, together with an opportunity to examine the prostates removed by him, enabled me to form, at first hand, a very fair idea of his operation, its scope, underlying principles and results. Briefly stated, he holds that the operation of prostatectomy is rarely, if ever, indicated prior to the age of fifty-five. In common, also, with German genito-urinary surgeons, he thinks that cases under that age, and many subsequent to it, receive most benefit from other expedients,—especially properly conducted catheterization,—and that only when "catheter life" has reached its limits should the radical operation be invoked.

He contends that a certain class of hypertrophied prostates —notably the large adenomatous type, which he considers proportionately more numerous than do many—can be most easily and safely dealt with by the suprapubic route, with perfect restoration of bladder function and a very small mortality.

Finally, he argues that these results are best accomplished by the technique which bears his name,—but for which he expressly disavows originality,—except such as consists in a revival of the anatomical teachings of Sir Henry Thompson some thirty years ago.

Thompson taught that the prostate has a thin, closely adherent, fibrous covering, dipping between the lobes of the gland, and from which it cannot be enucleated; also that outside this capsule is another covering (which Freyer terms the sheath), in reality the layers of the rectovesical fascia, between which and the capsule is a natural "line of cleavage." Freyer's comparison of the prostate, capsule, and sheath to an orange, with its closely adherent inner skin which dips between the various sections and is surrounded by the rind, from which it is readily enucleated, most perfectly conveys the anatomical idea on which his suprapubic enucleation is based. He calls attention to the fact that in fœtal life the prostate is double,—two

lateral halves,—and that later they are only united by the upper and lower borders, thus enclosing the urethra, while in the advanced adenomatous enlargement these connections, especially the upper, easily give way, facilitating their separation from the urethra. It is evident, from the loose application of the terms capsule and sheath by many American surgeons, —often using them synonymously,—that they have no clear conception of the Freyer-Thompson anatomical idea.

Freyer alludes, however, to the fact that prostates affected by fibroid hypertrophy (which he considers much less frequent than the adenomatous), and those in which inflammatory processes have existed, usually present a difficult "line of cleavage," owing to fibrous bands and adhesions between capsule and sheath which render them unsuitable cases for his method. Moynihan hints at this fact when he says that "the larger the prostate" (adenoma) "the easier the stripping." It is in the fibroid and inflammatory prostates that the perineal route, with the wide open door afforded by the inverted V or Y incisions, proves so useful, by permitting the necessary and often difficult dissection under direct observation.

A large element in Freyer's success is his careful selection of cases, choosing for his special technique chiefly the adenomatous type of hypertrophy, usually quite large prostates, ranging from two to twelve ounces in weight, and fairly soft, with a feeling, on examination, of being somewhat movable, or, as he very aptly puts it, "as if they had more or less shaken themselves loose in their sheaths."

Owing to careful selection and to the fact already mentioned, that he advises many patients against all operations for the time being, he operates, as he told me, on only about one in twelve of those applying.

Two cases of unfortunate selection came under my observation at St. Peter's Hospital, London (where Mr. Freyer is an attending surgeon). Both operations were by the Freyer technique, although he himself regarded the cases as unsuitable because of their fibroid character. The surgeon in each case was competent, one a man of international reputation. Each

operation was difficult and tedious, the glands coming away piecemeal or much lacerated. Both patients died within a week on account of sepsis. The sheath had evidently, in each instance, been torn, allowing infiltration of urine. A similar case is reported by Moynihan who, in his table of twelve cases, remarks, "Gland removed in six places. Not an enucleation similar to the other. Probably the right layer for stripping the capsule away was missed;" evidently a fibroid prostate. The result was fatal. These illustrate the essential difference between the method of Freyer and that practised by Belfield and McGill ten or fifteen years ago.

Applying the suprapubic method to all cases and failing to recognize the easy "line of cleavage," even in the suitable ones, the latter surgeons fell into one of two errors, either invading the gland, on one hand, and tearing out piecemeal the most prominent portions, resulting in an incomplete operation; or opening the sheath, on the other hand, allowing infiltration of urine and sepsis.

Freyer explains the remarkably small amount of hæmorrhage and the rapid obliteration of the cavity left after enucleation in most of his cases by the resilience of the sheath, or fascia, and the contractility of the surrounding muscle; a process which he compares to the rapid contraction of the parturient uterus after delivery of its contents.

The suprapubic enucleation, as done by Freyer (or as possibly improved on by Moynihan), avoids both the errors mentioned above, and when applied to proper cases restores deserved confidence in the "upper route." The only essential difference between the Moynihan and Freyer operations, of course, is their treatment of the urethra.

The former surgeon evidently believes it safe to bring away the entire prostatic portion with the gland, and, if correct, he has materially simplified the operation. The latter never removes the whole prostatic urethra unless by an unavoidable accident, and while I have seen prostates which he had successfully shelled from the urethra, leaving the latter intact, he admits that he often has been obliged to sacrifice the urethral

floor, with no unfortunate result. Still, he always endeavors to preserve the urethral *roof*. It would seem that time only can establish the superior wisdom of either course.

A priori, it would appear that a section of urethra entirely surrounded by cicatricial tissue would be very liable to stricture; otherwise the possibility of ignoring the urethra in prostatic enucleation undoubtedly simplifies the operative technique, and, by the way, must apply to the perineal as well as to the suprapubic route.

To summarize then, "rational surgical treatment of enlargement of the prostate," according to as good an authority as Mr. Moynihan, for which the profession is clearly indebted to Mr. Freyer, is based on the recognition of a distinct capsule and sheath with an easy "line of cleavage" in a certain well defined class of cases, which permits a rapid and safe enucleation of the gland through a very small suprapubic incision, by means of the finger only, unaided by instruments, and avoids the former accidents of either digging into the prostate or penetrating the sheath.

In April, 1903, Mr. Freyer had removed in this manner, during a period of about two and one-half years, forty-six prostates, the patients ranging from fifty-five to nearly eighty years of age, with three deaths, only one of which could be directly attributed to the operation. In the surviving forty-three cases restoration of bladder function was prompt and complete. He often enucleates the prostate in four minutes, rarely taking more than eight minutes; practically, all patients were entirely well within a month.

It is quite evident that the essential principle of close adherence to the space between capsule and sheath is as important in operations by the perineal as by the suprapubic route.

It is also plain that by the Freyer enucleation we have a choice, in selected cases, of an operation preferable in many ways to the dissection through the perineum. If American and English surgeons recognized the availability of both the upper and lower routes, and chose the operation adaptable to the

special type of each case, I am satisfied that prostatic surgery in general would be placed on a materially higher plane.

REFERENCES.

[1] British Medical Journal, Vol. ii, 1901, page 125, and subsequent papers in same journal.

[2] Stricture of Urethra and Hypertrophy of the Prostate. Freyer, second edition, Ballier, Tindall & Cox, London.